

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
19 May 2005 (19.05.2005)

PCT

(10) International Publication Number
WO 2005/044375 A1

(51) International Patent Classification⁷: **A61N 2/02**

(21) International Application Number:
PCT/EP2004/052914

(22) International Filing Date:
10 November 2004 (10.11.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
TO2003A 000893
11 November 2003 (11.11.2003) IT

(71) Applicant (for all designated States except US): **IGEA S.r.l.** [IT/IT]; Via Parmenide, 10/A, I-41012 CARPI (IT).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **GIARDINO, Roberto** [IT/IT]; Via Toscana, 105/2, I-40100 BOLOGNA (IT). **CADOSSI, Ruggero** [IT/IT]; Corso Roma, 32, I-41012 CARPI (IT). **SETTI, Stefania** [IT/IT]; Via Antonelli, 14, I-41012 CARPI (IT).

(74) Agents: **JORIO, Paolo** et al.; Studio Torta S.r.l., Via Viotti, 9, I-10121 Torino (IT).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

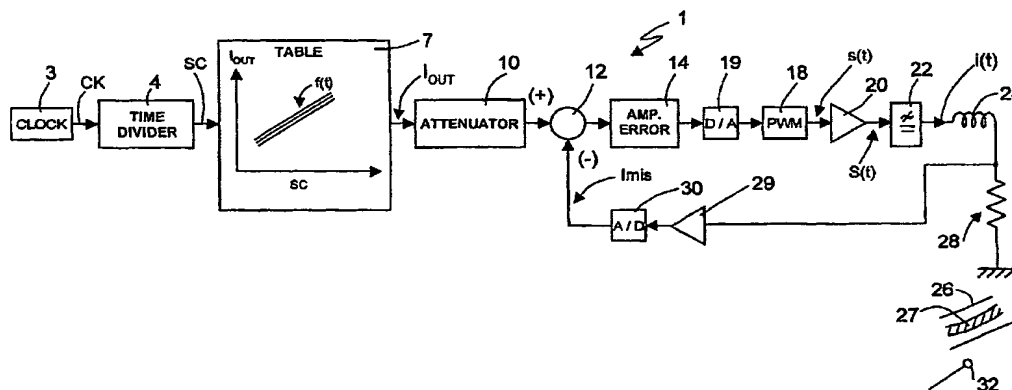
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: ELECTROMAGNETIC FIELD STIMULATOR DEVICE FOR ANATOMIC BIOPHYSICAL CHONDROPROTECTION



(57) Abstract: Electromagnetic field stimulator device in which a current generator device (7, 18 and 20) supplies a solenoid (24) with current (i(t)) the waveform of which includes the repetition of a ramp having a certain slope. This current causes the generation of an electromagnetic field that induces on a control probe (32) irradiated by the electromagnetic field, an induced voltage (Vin) of markedly constant amplitude during the ramp-like linear growth period of the current (i(t)). This electromagnetic field is used to preserve the integrity of articular cartilage subject to degeneration.